THE TENNESSEE FARMER.

BY THOMAS EMMERSON, AT $1 PER ANNUM IN ADVANCE—OR $1 50 AT THE END OF THE YEAR.

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TO DESTROY WORMS ON CABBAGE.

The following receipt has been communicated to us by a subscriber:

Judge Emmerson:

For at least 15 years past I have pursued the following mode of destroying worms on cabbage with uniform success:

About day-break, when the dew is on them, take rye meal in a sifter and sift it on every head that has any worms on it; as soon as the dew dries they will become stiff from the meal attached to them while wet, and will never move again; this you may rely on.

The same subscriber also communicates the following mode of cultivating Sweet Potatoes, for which we return him our thanks. If every farmer in the country would follow his example, in communicating to us all the useful knowledge acquired by him, and not already disseminated, no one can compute the amount of good which would thereby result to the community.

To the Editor of the Tennessee Farmer:

Sir: In one of your late numbers, I noticed directions for raising sweet potatoes. I have pursued it heretofore with success, and in warm countries, when seed is scarce, it is a very good one. Last spring, I planted an acre in the following manner: After breaking up the ground 7 or 8 inches deep, I checked it off with furrows about 3 feet apart, I then put 2 or 3 quarts of leached ashes on each check where the hill is usually made; I then dropped two uncut potatoes in the centre of each check, covered them with the hoe, and made the hill in cultivating them. In seven years past, I have not made a hill to plant in: last year I raised on one acre four hundred bushels.

If I lived in a climate as unfavorable as yours for sweet potatoes, I would use strong ashes and lime, slacked and unslacked, in the bottom of the hills, and have no doubt the practice would prove highly beneficial to your sweet potatoe crop. I have been uniformly more successful than my neighbors in raising sweet potatoes. Two years ago the season was remarkably dry, yet, by not planting my potatoes above the surface of the surrounding ground, I made at least a common crop. These suggestions are at your service.

J. SMITH.

In addition to the above, we would earnestly recommend to the farmers in this section of the country, to haul sand on the land intended for the sweet potatoe patch, and by frequent ploughings and hoeings to effect a complete admixture of it with their clayey soils.—[Ed. Ten. Far.

NEW MODE OF COOKING IRISH POTATOES.

The following mode of cooking Irish Potatoes is highly recommended to us, by a gentleman who has recently eaten potatoes thus dressed in the northwest:

Instead of putting the potatoes in the water, first put a quantity of rocks in the vessel in which they are to be cooked, pour in water amongst the rocks until it rises to a few inches of the top of them—then lay the potatoes on the rocks so as not to come in contact with the water, and let it boil until the potatoes are cooked by the steam. It is stated, and we have no doubt correctly, that potatoes thus treated will be much more dry, mealy and better tasted, than if boiled in the water. The process is simple and easy, and well deserves the attention of all housewives who have any ambition to excel in the performance of their appropriate duties. Potatoes thus treated, we should suppose, would not only be far more grateful to the taste, but a much healthier article of diet, than those dressed in the ordinary mode. We say to the ladies try the experiment.

☞We return our sincere thanks to our correspondent "A Small Farmer." We are sure that his own good sense will enable him to discover the insufficiency of his third, and probably most operative of those reasons which have heretofore restrained him from rendering his aid to the great cause of agricultural improvement. The two first we think are equally insufficient, because by appropriating a few leisure moments at a time, to the laudable task of committing his thoughts to writing, he would soon find, that, notwithstanding his industry, time enough for this purpose could readily be found; and as to the matter of expense, there need be none incurred by him; private opportunities of conveyance are frequent and should they not any time occur, we will most cheerfully assume the expense of postage. His communication bears internal evidence, that if he be now "*a small farmer*," a continuance of his zeal, energy and desire for knowledge, will soon convert him into a *great farmer*.—We do hope that the public will be not only indebted to him for much valuable information in future, but, for what is of still greater importance, for having stimulated many of his agricultural brethren to follow his example, and thereby to diffuse through the whole country, a mass of knowledge, and a zeal in behalf of agricultural improvement, the salutary effects of which, it is not easy to appreciate. His second number on the cultivation of sweet potatoes will appear in our next.

To the Editor of the Tennessee Farmer.

Sir: I have been a reader of your very valu-

able paper since its commencement, and have seen your repeated solicitations to your agricultural friends to communicate the results of their experiments for publication, and by this means contribute to the stock of agricultural knowledge. I have been pleased with the communications from others, which you have published, and feel that I have been profited by them. I have often thought that the same obligation rested on me, equally with others, to contribute my share to the general stock, but have hitherto been deterred by two or three considerations—1st, The want of time to commit my thoughts to paper: 2d, My inability to meet the expense of communications, for I am very poor; and 3dly, Because I thought it would be arrogance for a tyro like me, in the art of agriculture, to tax the time and patience of an Editor to examine the communications which I might make, much less to publish them for the annoyance of enlightened readers. Laying aside, however, these considerations for the present, I shall venture to send you a short essay, and submit it to your better judgment, whether it be worthy a place in your columns.—I hope you will judge impartially, and not from mere courtesy to a patron, insert it, when its place might be filled with better matter. I can judge from its reception, whether it will not be superfluous for me to trouble you with further communications.

VALUE OF CLOVER.

Sir: It would seem, after what has been said and written, as to the value of Clover, that it would be entirely needless for any one to say or write more about it; but, when we look over the almost universally miserable, poor, worn out farms which present themselves to the eye of the traveller every where throughout East Tennessee, I, for one, am ready to conclude, that what has been said and written, has either not been heard or read, or has been most shamefully and criminally neglected. I do not know how I can better set forth its value than by giving a statement of its product, under the imperfect culture which I have given it. I sowed one bushel of seed on about twelve acres, in the spring of 1834, on Wheat. I gave it no further attention until the spring of 1835, when I took a heavy brush and ran over my Clover, in order to level the stubble and weeds which remained erect over winter.—About the first of May, I sowed on it about three pecks of plaster to the acre. About the first of June, I commenced cutting and curing. The method I adopted in curing was that of wilting and salting, as directed in a former number of the Farmer. My neighbors, some of them, laughed at me, for what they supposed to be my folly, and others remonstrated. But as raising and saving Clover was an experiment with me any how, I determined to push it through, and see the ultimatum of the matter. My Clover yielded a little upwards of two tons to the acre. I have been using it ever since I began to cut it. I am now decidedly of opinion that it is the best hay ever given to horses. To this opinion I have come, from the fact, that I have found they eat it much better than any other hay. They have required less grain, endured more labor, and kept in better order than they have ever done before. But designing to make the most of my Clover I could, when the second crop ripened, I proceeded to cut and cure it for seed, as directed in the Farmer; from which I have obtained twelve bushels of seed. But I did not cut all my second crop. Now, then, let me make an estimate, and see how much I have profited by my Clover.

24 tons of Hay, at 50 cents per hundred weight, is worth	$240
12 bushels of seed, at $8 per bushel, is worth	96
Which, when added together, will make	$336
My seed and plaster cost $13,	
The labor, I will say, cost $23,	
Which, added to the 13 above, will make	36
Which, deducted from the whole amount will leave a balance of	$300

as the profit of my crop of Clover.

But more, I have my land in a state of improvement, which, I believe, will ultimately compensate me for my expense and labor.

Now, sir, I have made this statement, hoping that some of my agricultural brethren will be induced to make the experiment for themselves; and I have no doubt, but that they will meet with similar success. And now is the time to do it. Now is the season for sowing. There is an abundance of seed in the country. Let no one plead that futile and vain excuse, which has so long and often been plead, that he is not able to purchase seed. I do know that every man who will determine to try, can find means to procure a greater or less quantity, and at least make a beginning. My brethren, let us arouse from that lethargy which has so long kept us in poverty, want, wretchedness, and misery—and let us do something to redeem us from this despicable condition. Clover is undoubtedly the great lever of agricultural improvement in this country.

A SMALL FARMER.

Hopewell, Feb. 9, 1836.

MULBERRY SEED.

The proprietors of the Farmer & Gardener announce to the public that the seed of the Morus Multicaulis or Chinese Mulberry is not to be had in the United States or France; the mode of propagating it in the latter country being, as heretofore with us, by layers or cuttings. As from the great distance they would have to

be transported in our extensive country, and the expense of carriage, this mode will prove much more costly than the raising the trees from seed, which, from the vast demand for them, would be certain to meet with a ready sale at good prices. It is to be hoped that nursery-men and others, having the oldest trees in the country, will preserve and appropriate some of them to the raising of seed, so that an ample supply of the article may be furnished at the earliest practicable period. This course is dictated alike by patriotism and self-interest. In the mean time we should suppose, that until a sufficient supply of seed can be raised at home, the owners of old trees in France or Italy, might be engaged to raise them for a few years, so as to supply the demand until superseded by the produce at home.

COTTON.

We tender our thanks to our unknown Correspondent for his communication, which we hope will prove useful to his brother planters in West Tennessee. His treatment of his land was certainly well calculated to promote its improvement; and if the stalks of his fine crop were subsequently bestowed on the land as manure, it must have been greatly benefitted thereby. But why in the name of common sense should such a man be ashamed to contribute to the benefit of his country, by diffusing useful knowledge, on account of any supposed defect of his style? If our correspondent, and hundreds of others, would only reflect for a moment on the object in view by Agricultural readers, that it is the acquisition of useful and profitable Agricultural knowledge, not the improvement of their style, or the gratification of their tastes for literary luxuries, we should hope that this most powerful, and yet most unreasonable, objection to tendering their aid in behalf of the great cause of agricultural improvement, would instantly vanish. Let the matter be useful—let it be plainly and truly stated, with precision, so as to be easily understood by all interested in knowing it, and we care not a fig for the style. Defects in grammar and orthography, we shall endeavor to correct with pleasure, but useless, flimsy, ornamental, literary frippery, we neither want, nor would we, if ever so expert in the art, be willing to bestow, for the simple reason, that it would only detract from the utility and value of compositions designed for general use.

FEBRUARY 17th, 1836.

Mr. Editor:—I have been very anxious that some one of your readers in Middle Tennessee would say something about raising Cotton, as that is the crop we are most interested in, in this part of the State. As I have been heretofore disappointed in this, I will give you the result of a trial last spring on a part of my crop. About the middle of September, 1833, I sowed a field of 18 acres in rye, without ploughing. On the 11th day of November following, I turned in 2 milk cows and 37 sheep, and continued them on until the 26th of March, with the exception of about 20 days in January, when the ground was too wet. The summer of 1834 I gathered the best crop of rye I ever made; after the crop was saved, I turned in my hogs to get what was left. In the mean time, the hog-weeds grew about 4 or 5 feet high, tolerably thick over the ground. In the fall of '34, I intended to fallow the field, but neglected it. In the spring of 1835, I came to the conclusion that I would break down the hog-weeds, and make the ridges for my cotton between the old ridges, covering the rye-stubble and weeds immediately under the place where I intended to plant my cotton. My plan of making my ridges is this: about the 1st of March, I run the first furrow as near the top of the old ridge as possible, throwing the soil about the middle, making a ridge at 4 furrows, leaving all the stubble under it, and the ground hard under the stubble. I planted the cotton seed about the 12th of April, running a hollow block over it to cover the seed. Just before the cotton come up, I run the block over it again; after that time, worked it just as I did the balance of my crop. It was remarked by almost every farmer that saw it, that it was the best field of cotton in the country; and I believe it turned out to be so, for I gathered 20,754 pounds of good cotton, besides what was lost by the wet weather. If I knew as well how to write for a newspaper as I know how to cultivate cotton, I would tell you how much seed to plant and how to work. In conclusion, I will just say, if ever you quit printing and turn cotton planter, don't you run your ploughs with the bar next to the cotton, or use bull-tongue ploughs, after the cotton has made the fourth leaf.

A Friend to Cotton Planters.

P. S. I would give my name, but I am ashamed of my style of writing.

GREAT CORN CROP.—Mr. Philip Reybold, of Red Lion Hundred, (New Castle county, Delaware,) has sent us the following statement of the crop of corn produced last season in three of his fields. Mr. Reybold is probably the largest farmer in New Castle county, and the following results will show that he may fairly claim a rivalry with the best in the country:

One field of	22 acres,	2,216 bushels.
Do.	30	2,249 do and 3 pecks.
Do.	27	1,819 bushels.
	79 acres,	6,284 do and 3 pecks.

It will thus be seen that, in a field of 22 acres, the yield exceeded 100 bushels of corn per acre! The whole crop on 79 acres averages nearly 80 bushels.—*Journal.*

Agriculture is the nursery of patriotism.

From the Genesee Farmer.

AGRICULTURAL PAPERS.

Mr. Tucker,—I have been watching with no small share of interest to learn what progress the Genesee Farmer would make in the affections of its patrons, and the fact that it was commenced without a subscriber, and is now about entering its sixth volume, is pretty satisfactory evidence of its having many warm friends. Indeed, it would be matter of surprise, if a journal conducted with so much ability, and possessing so many intelligent and zealous correspondents, had not worked its way high in the esteem of its patrons. That western New-York has produced and can sustain such a journal, is, to me, a source of much gratification, and that it may live, and increase in interest and value, is the most devout wish of my heart. No one can calculate the good which such a periodical will produce,—the influence which it exerts over the farming community is immense, and is gradually, though surely, revolutionizing the agricultural world, that is, so far as that world is reached by it.

I could wish the value of such journals to be more generally known, that the farming interest might rise faster, and that a greater portion of the agricultural community might be benefitted by the treasures which they contain. I know many farmers who patronize some agricultural paper, and who carefully study it, but, among the whole number, I know not one whose improved and improving practice does not plainly bespeak the instruction and benefit he derives from his paper. Among this number I know some whose improvement within a few years has been astonishing, and may be attributed mainly to the influence exerted over them by their Agricultural Paper. So palpable and certain are the effects of agricultural knowledge diffused among farmers, that I would almost undertake to go through the country and by the appearance of his farm to point out the farmer who does, and the one who does not, read an Agricultural Paper.

As a medium of communication between farmers, an agricultural paper seems to be all that is desirable—easy, cheap, and useful. What cause for regret that more will not avail themselves of its advantages!

Although the Genesee Farmer has very many correspondents who are among the most intelligent farmers of the country, and whose communications are uniformly instructive, yet its value might be enhanced, if the number of its contributors was augmented from among that class of farmers, whose judgment, skill and success in farming operations entitle them to a rank among the first. And our State is not wanting for such men. There are many within my own circle of acquaintance. Had not the Genesee Farmer been assisted by the contributions of practical farmers it would not at this time have possesed the highly respectable reputation which it now does. Such papers, to be most useful, must be the progeny of men who know and practice what they write. Farmers are too apt to labor under the erroneous impression that what one knows, is known to all. If so mischievous a doctrine were exploded and every farmer would venture to offer his own system of practice to the public, the editors of our agricultural prints would not labor under the necessity of searching theoretical authors for something with which to fill up their columns—the only difficulty would be, to find room for what was strictly worthy of publication.

It is notorious that a large proportion of farmers are unsuccessful in their business. And why is this want of success? May we not see it in the fact that they are ignorant in the great principles of their own business? And why ignorant of these great principles? Perhaps through the force of early education,—they may never have been taught that it could be useful to them in after-life, or that it could promote their happiness to bring science in aid of their labor, or, they may even have been taught that the more learned they were, the more they would be unfitted for the occupation of a farmer. Mistaken, yet too common Education! and in it we see the great cause why the farmer does not rank higher in the grades of society, and his influence more felt in the councils of the nation.

And now, Mr. Editor, while I congratulate you on your success in the publication of the Genesee Farmer hitherto, allow me to express my sincere wish that you may hereafter meet with success in its publication, beyond even your most sanguine expectations, and while with emotions of pleasure I hail the appearance of its sixth volumne permit the desire that it may have patrons enough to fill your pockets with money, while, by way of prompt pay for the benefit, those patrons may find new light and mental cheer in its hitherto pleasing pages.

Accept, sir, for yourself, and the patrons of the Genesee Farmer, my cordial wish that the first day of January 1836 may be to you, and to them a happy New-Year.

Westel W. Powell.

Milton, Dec. 1835.

The true economy of housekeeping is, simply the art of gathering up all the fragments, so that nothing be lost. I mean fragments of time, as well as materials. Nothing should be thrown away so long as it is possible to make any use of it, however trifling it may be; and whatever be the size of a family, every member should be employed either in earning or saving money.

From the New England Farmer.

INDIAN CORN.

T. G. Fessenden, esq.,

Dear Sir—In December, 1834, you published in the N. E. Farmer a communication from me, concerning a species of Indian corn, which I had planted the preceding season, the seed of which I had procured of Judge Buel. Its chief recommendation, in my estimation, resulted from the fact, that it came to maturity about a fortnight earlier than any kind of field corn which the farmers in my neighborhood were accustomed to plant; thus anticipating the early autumnal frosts, and enabling me to sow my corn land with wheat in tolerable season. I expressed the opinion also, that it had been as productive as any other corn which I had ever planted; but as I had tried it but once, I did not feel so confident of its productiveness, as to commend it on that account. I have planted the same kind of corn the past season, and no other; and the result has fully equalled my expectations. I was able to gather my corn leisurely and finished sowing my corn and potato ground by the 3d of October. In former seasons, with a different species of corn, I was always hurried, and was seldom able to finish sowing wheat till about the middle of October, and in some seasons, not until after the 20th. Wheat sown so late, is more liable to blast, and is more exposed to be winter-killed, than that which is sown earlier, and has opportunity to get well rooted before the ground freezes up. Late sown wheat will sometimes produce a fair crop, but success is so uncertain, that it should be avoided when practicable.

I have taken some pains the past season to ascertain the productiveness of this corn with some degree of certainty. In order to try the experiment, I selected a piece of ground, which, by actual admeasurement, contains one acre and twelve rods. This ground was planted the preceding year, about one half of it with potatoes, the other half with corn. This selection was made, not from choice, because I do not approve of planting the same ground for two successive years, and more especially with the same kind of crop. The result of this experiment shewed evidently that it is bad husbandry to plant the same ground twice in succession with the same crop—for the corn on that part of the piece where corn grew the preceding year, was not so well eared, nor were the ears so large, as on that part which had been planted with potatoes.

In the beginning of May, twelve loads of coarse manure from the barn yard, were spread upon the land, and it was then well covered under a furrow of five or six inches deep. Eight loads of fine manure, composed chiefly of earth that had been deposited in a low spot in the yard the preceding summer, were then spread upon the land, when it was harrowed with a light seed harrow, till the surface of the ground was well pulverized and the fine manure was mixed, and partly covered with the earth. The ground was planted on the 13th of May, in rows of three and a half feet asunder, with a space of two feet between the hills. The seed was soaked about 12 hours in warm water, mixed with plaster, planted five kernels in a hill, and at the first hoeing, thinned out, so as to leave but three stalks standing in each hill. The corn was hoed three times, and the last hoeing was performed early, about the 25th of June, some days before the corn began to show its tassels. I have long been of the opinion, that cutting or disturbing the fibrous roots just before the corn is about to set for ears, is injurious to the crop, as it impairs its capacity of imbibing nourishment at a time when it is most essential.

The cultivator was used at each hoeing, and the old practice of hilling up the corn at the last hoeing, was dispensed with. The stalks were cut early in September, but not until they had generally began to change their color, nor until many of the ears were fully ripe. The corn was not picked until the 30th Sept., and between that and the 5th of October was husked out and cribbed. From this acre and twelve rods of land were gathered 217 bushels of ears of good sound corn, and seven bushels of ears of poor corn, making 224 bushels in the whole. Had I anticipated so large a product, I would have preserved and threshed it by itself, in order to ascertain the exact quantity of shelled corn. But a part of it was husked and mixed with other corn before my curiosity to know the quantity was excited. From the experiments which I have made, I am satisfied that there were, at the time of husking, about half as many bushels of corn as there were of ears.

My crop suffered a considerable diminution from two causes. A little before the time for the first hoeing, I found that my neighbor's poultry had been very busy in the field, and had actually scratched and pulled up at least one fourth of the piece. This had to be planted over the second time, and was much less productive than the first planting.

While the corn was in the milk, a violent gust of wind passed over the field, and laid the whole of it almost prostrate. Many stalks were broken of and never rose again. But for these two causes, there would have been a considerable increase in the product, and an almost total abstraction of the poor corn. The green and mouldy ears were wholly attributable to these causes, and without them the poor corn would scarcely have exceeded one per cent. I am, very respectfully, yours,

SAMUEL LATHROP.

West Springfield, Jan. 1, 1836.

From the Jonesborough Republican.

UNIVERSAL EDUCATION.

In contemplating this deeply interesting subject, the reflecting mind is struck with astonishment, that amongst any other class of men, except the Atheists, there should exist any difference of opinion, in relation to its inconceivable importance!! If, indeed, our world, and we ourselves are the products of blind chance, or of some malevolent being, then may it well be doubted whether the cultivation and improvement of all, or of any of the human faculties, physical, moral, or intellectual, would prove conducive to the increase of human happiness. But if it be once conceded, that man is the creature of an infinitely wise and benevolent Being, then, if any reliance can be placed on the plainest and most obvious decisions of reason, it necessarily follows, that it is both his first duty and his highest interest, so to cultivate and improve all his powers and faculties, as to elevate himself to the highest state of perfection of which his nature is capable, and of which the circumstances in which he is placed will admit.

That man is a compound being, possessing as it were, three distinct natures, his physical or animal, his intellectual and his moral, is a truth, too obvious to be denied, and therefore it would be ridiculous and absurd to attempt to prove it. To each of these distinct natures belong certain powers and faculties, adapted to the production of the ends for which they are designed. At his birth, all these faculties and powers are almost in a dormant state, to render them capable of attaining the ends, to the production of which they are adapted, it is indispensably necessary, that they be cherished, cultivated and improved. To enable the infant to acquire the size, the strength, and the agility, of which his physical nature is capable, food, air, and exercise are indispensable. It is, therefore, manifestly the duty of the parent to supply the newborn infant with that food without which its life would speedily become extinct,—it is no less his duty to furnish him with that exercise, without which he could never attain that strength and agility, which alone can raise him from the helplessness and imbecility of infancy. The intellectual powers of man, at his birth, are no less feeble than his animal or physical; they are equally capable of improvement, and they no less require exercise and training for the increase of their strength and vigor. Were this exercise in both instances to be entirely withheld, the certain and inevitable consequence would be, perfect imbecility, both of body and of mind. The same is the case with the moral faculty, to render it useful, either to its possessor or to others, it must be exercised, cultivated and improved.

Surely, if the decisions of reason can be, in any case, relied on, the following positions must be deemed by every sound mind to be incontrovertible.

First—If man be the creature of an intelligent being, and if he has been endowed by that being with intellectual faculties, adapted only to the discovery of truth and the acquisition of knowledge, it must have been the design and the will of his Creator, and therefore the first law of his nature, that those faculties should be exerted about their appropriate objects. Otherwise we must suppose an intelligent being to have conferred those faculties for no purpose, and without any design whatever, than which, no greater absurdity can be conceived of or imagined.

Secondly—If this creator of man, be not only an intelligent, but a benevolent being also, then obedience to this first law of his nature, must tend to the promotion of man's true happiness and welfare; otherwise, we must suppose, that a benevolent being has created man, endowed him with faculties which he has commanded him to exert and improve, and yet that obedience to this command is inconsistent with his welfare and happiness—a supposition, no less absurd than the former. It is easy to conceive of the possibility of an unintelligent being conferring powers and faculties without design, and of a malevolent being requiring of his creatures the exertion and improvement of faculties and powers, whose exertion and improvement would be incompatible with their happiness and welfare but that a wise and benevolent being should so act, is manifestly impossible, and to assert, that he would, is neither more nor less than to assert, that two directly contradictory propositions are both true.

Thirdly—That in proportion to his obedience to this first law of his nature will man approach towards the attainment of its true dignity.

Fourthly—If it be the duty and the interest of any one man to obey this first law of his nature, it must be equally the duty and the interest of every human being to do so likewise—because, the law is universal and equally obligatory on all.

Fifthly—If it be the duty of every parent to furnish his child with the food, air and exercise, which are necessary to the continuance, growth and perfection of his physical or animal nature, it is equally his duty to afford to him the aid and instruction requisite to the perfecting and improving his intellectual and moral natures; the extent of the obligation in both cases, being limited only by the ability of the parent.

Sixthly—If it be the duty of every legitimate government to promote, to the highest practicable degree, the welfare and happiness of the whole people, and if the welfare and happiness of every individual of which that people is com-

posed, will be increased, in proportion to his successful obedience to that law of his nature, which commands the cultivation and improvement of his intellectual and moral faculties, then is it the unquestionable and primary duty of every such government to exert all its powers, energies and resources, to the greatest practicable extent, for the purpose of affording to every individual the best means for obtaining the highest practicable improvement of those faculties.

Seventhly—That in proportion as any government performs this duty with wisdom and fidelity, in the same proportion does it accomplish the end for which it was instituted—the promotion of the welfare and happiness of the people; of which happiness, liberty is an essential ingredient, and, therefore, every government which fails or neglects to perform this duty, whatever else it may do, is treacherous to the cause of liberty and of human happiness, and ought to be abolished as a nuisance.

Eighthly—That no fouler dishonor can possibly attach to a Republican Government, than to permit itself to be outstripped by a monarchy, or by an aristocracy, in efforts to promote the general diffusion of knowledge and virtue, by means of a wise judicious and efficient system of Universal Education, and, therefore, that all public functionaries, having the power, and failing or refusing to discharge this duty, are unfaithful to their trusts, or incompetent to the discharge of the duties of their stations; and whatever else they may do, should be indignantly hurled from power, as wholly unworthy the confidence of a free people. All their professions of patriotism, however loud and boisterous, should be contemptuously scouted, as being the hypocritical pretences of unprincipled demagogues, the most despicable, and at the same time the most dangerous and execrable of all those enemies to liberty, to virtue, and to the dignity and happiness of man, by which Free Governments have hitherto always been assailed, annoyed and overthrown.

We boast, and justly boast, of the wonderful improvements of the age in the arts and in the physical sciences. Let the people of the United States but awake to a just sense of the infinitely greater importance of the intellectual and moral improvement of the whole people. Let them authoritatively require of their public agents, instantaneous, vigorous and enlightened action on this of all subjects, incomparably the most deserving of their highest regard. Let them do this, and before the next generation shall have passed away, our country will be able to exhibit to an astonished world, a population, as far superior in intellectual attainments, in moral worth, and in every thing which goes to constitute the dignity and the elevation of human nature, to the vaunted civilization and refinement of the most polished nations of Europe, as the attainments of those nations are, to the ferocious barbarity and the low and grovelling bestiality of the most untutored tribe of savages in the darkest regions of benighted Africa. The now vaunted improvements in the arts and sciences, valuable as they are, will then sink into insignificance, when compared with the mighty improvement thus effected in the intellectual and moral character of man. The former will justly be regarded, as in truth they are, of little or no value, except on account of their tendency to produce the latter.

Let no one say, that these are the views of a visionary enthusiast, beautiful indeed in imagination, but wholly impracticable. Nothing is impracticable but what is impossible—and who will dare assert that it is impossible for men in general to reach to that state of perfection of which the attainments of thousands demonstrate that human nature is capable. Let such an objector remember what would have been said, nay, what was actually said, by the bold, the self-conceited and ignorant pretenders to knowledge fifty years ago, in relation to the practicability of the astonishing improvements which we now daily witness in successful operation—and let their mortifying blunders inspire their successors with a greater degree of modesty, in undertaking to assign those limits, beyond which, human improvement shall not be permitted to progress—otherwise, like their prototypes, they may live to experience the deep mortification of discovering, that to make what has been done, the criterion by which to determine what can be done, evinces, not that great intellectual vigor to which they most preposterously pretend, but a profound degree of ignorance, surpassed only by the contemptible vanity with which it is conjoined, in the inflated minds of the vain and arrogant pretenders to that wisdom which undertakes to prescribe those limits, which the almost illimitable energies of the human mind shall not be permitted to transcend.

Potato Bread.—The manner of making this bread is simple and easy: boil good potatoes, properly drain off the water as soon as they have boiled sufficiently, let them remain in the warm kettle to dry, take off the skin, put them in a mortar and pound the meal fine, to which add a little fine salt. Previous to putting in the yeast to raise the bread, mix the potato meal thoroughly with the flour, afterwards pursue the usual process of making bread from flour.

Remarkable Fact.—Yesterday a sample of oats was exhibited on 'Change, which was part of a cargo of five thousand bushels recently imported from London. Considerable quantities of other descriptions of grain are now on their way to this country from Europe.—*N. York paper Feb.* 17.

From the Farmer and Gardener.

LIME AS A MANURE.

The efficacy of this mineral as a manure, is beginning to excite very general attention. The success which has uniformly attended its application to almost all kinds of soils, extorts confessions of its utility from many who, until recently, had but little, if any faith in its meliorating powers. As there seems to be a universal desire to obtain information upon the subject of its *specific virtues*, we will endeavor to give something like an abstract view of them, and we know not how we can better effect our object, than by availing ourself of a condensation of the luminious paper upon the subject, submitted by Mr. Browne, of Derby, England, which may be found in the transactions of the society of arts. He asserts:

1st. That recent vegetables, as clover, laid on heaps and stratified with fresh lime, are quickly decomposed, even in a few days. The heat occasioned by the moisture of the vegetables uniting with the lime, he supposes, quickens the fermentation of the vegetable juices, and produces charcoal in consequence of combustion similar to that frequently produced in new hay stacks, which if any air be admitted burst into flame.

2d. Lime for many *months* continues to attract moisture from the air or earth, which it deprives, he supposes, of carbonic acid, and then suffers it to exhale again, as is seen on the plastered walls of new houses. On this account it must be *advantageous when mixed with dry or sandy soils*, as it attracts moisture from the air above, or the earth beneath; and this moisture is then absorbed by the lymphatics of the roots of vegetables.

3dly. By mixing *lime* with *clays* it is believed to make them less cohesive; and thus to admit of their being easily penetrated by vegetable fibres.

4thly. A mixture of lime with clay destroys its superabundance of acid, if such exists, and by uniting with it converts it into gypsum.

5thly. When lime is mixed with a compost of soil and manure, which is in the state of generating nitrous acid, it arrests the acid as it forms, and produces a calcareous niter, and thus prevents both its exhalation and its easy elutriation.

And lastly, fresh lime destroys worms, snails, and other insects, with which it happens to come in contact, and with which almost every soil abounds.

These are among the chemical effects of lime, and its practical operation, and beneficial results, in the increase of the quantities of the products of the earth, are equally as astonishing as they are salutary. Lands which for years have yielded from 6 to 10 bushels of wheat, have, by the application of *lime*, the ploughing in of a single crop of clover, and a proper observance of the rotation system, been so far meliorated as to yield from 20 to 30 bushels of good heavy wheat to the acre. With such facts before the eyes of landholders, within the reach of lime, we would ask, is there any apology for their permitting their soil to remain longer impoverished? We broadly affirm that there is none—and we go further and say, that those who reside within an accessible distance in the *marl districts* of tide water, will be guilty of culpable negligence, if they longer omit to make a liberal application of it. Shell lime can be delivered on any estate lying on a navigable river or creek, not more than 70 miles from the place of procurement, for 8 cents a bushel; and should any man begrudge such an outlay, when it is sure to bring him back two and three hundred per cent?—We answer, certainly not.

Cows.—The management of cows, so as to keep them healthy, and ensure a constant supply of pure milk, is not generally understood in cities, and if understood is not practiced. Strolling through Orange, near Grand street, says the Editor of the New York Star, our olfactory nerves were refreshed with the delightful odor of cows, something like new mown hay, which perfumed the air, and that too in a part of the city not remarkable for its cleanliness. On pushing open the door of a wooden stable or pen, we found thirty fine cows each in a stall, and kept in the most wholesome manner. They were attended by grooms like horses, curried and kept clean daily, fed with warm swill three times in twenty four hours, besides meal and hay. The swill is emptied into a vat and pumped into their troughs, and the free use of water coursing constantly through the stable, keeps the place sweet and clean. The consequence of this treatment is, that their hides are smooth and glossy, the animals lively, and their udders distended with milk, which is served to city customers. We think this mode preferable to turning cows loose on the common, to pick up the stunted shrubbery, and nip the rank grass, or walk the streets gathering the offals of the city.

The breath of these cows is considered good for consumptive persons; and although the stable has not an inviting exterior, yet the condition of the tenants is really admirable, and we should prefer milk from animals kept so carefully.

From the New York Cultivator.

COB MEAL.

Shrewsbury, N. J. 6th mo. 27th, 1835.

JESSE BUEL.—Respected Friend—From the favorable observations of intelligent persons relating to the use of corn and cobs ground together as food for cattle, I have had a cast iron mill recently put up for the purpose of crushing them. Not having noticed any remarks on the subject in the Cultivator, I shall yet be glad to avail myself of thy experience and judgment as to the best mode of preparing and feeding such meal. I do not wish the pages of your useful paper occupied with that which is interesting only to myself or to a few of its readers—but if the use of the corn cob as food for cattle is of sufficient general interest to give an article upon it, I for one shall be gratified to learn if it be better to grind them alone with the corn, or to mix oats in the hopper, should the meal be fed dry, or wet, separately, or mixed with cut hay, cut stalks, or cut straw; at what times and in what quantities?

A pretty extensive feeder for the Philadelphia market once told me, that a bushel of meal made of corn and cobs was quite equal to a bushel of meal made of corn and oats, that his cattle throve as fast on the former, and that they never stalled (cloyed) on it.

I use the present opportunity to bespeak a sufficient quantity of thy "*Dutton*" seed corn to plant 12 acres the next season, say, 21-2 bushels shelled.

With much respect, thy friend,
ROBERT WHITE, Jr.

In confirmation of the great economy in *preparing* food for animals, one of the aldermen of New York city told me, that at the public yard, where the previous year they had fed out hay and oats whole by the cutting of the hay and grinding of the oats, 8 bushels oats and 15 cwt. of hay fed the same number of horses, doing the same work, the same length of time, and kept them in as good order, as 24 bushels of oats and 35 cwt. of hay had done when fed whole!!

REMARKS OF THE CONDUCTOR.

The cobs of corn undoubtedly contain much nutriment. P. Minor, of Virginia, [*See Am Far. Vol.* 1, *p* 324] has given us the results of a nicely conducted experiment to ascertain the amount of this nutriment. He took ten bushels of corn and cob, weighing 367 lbs. and ten bushels of shelled corn, and subjected them to the process of distillation. The product of the corn and cob was 13 gallons of spirits, and of the pure corn 18 gallons. Estimating that the ten bushels of corn and cob would have given five bushels of shelled corn, which is the general proportion, there will be left, as the product of the five bushels of cobs, four gallons of spirits, or nearly half as much as was afforded by five bushels of corn. Mr. Minor remarks that the cob affords other nutritive matter than the saccharine, which is converted into alcohol, as mucilage and oils.

We have besides abundant testimony, in the practice of eminent farmers, of the utility of feeding cob-meal to animals, always mixed, we believe, with meal of the corn or oats. Cob-and-corn meal is improved by scalding, still more, for hogs, by boiling, with potatoes, apples and pumpkins, and, yet more by a partial fermentation.—All these preparations facilitate digestion. An animal high fed with raw grain, whether horse, hog or ox, voids much of its food in an undigested state, which is of course lost for all beneficial purposes. Grinding grain for animal food, therefore, is universally admitted to be economical, and cooking and partially fermenting it, it is no less true, further enhances its value for swine. Even the water in which it is cooked augments its nutritious properties, in consequence, probably, of some chemical change effected by the boiling operation. Fish subsist in pure water, as is strikingly illustrated in the management of the gold fish. The experiments of the Rev. H. Colman, in fattening swine further warrant this operation. "At first," says this nice observer, "we employed half a bushel of Indian meal to make a kettle full of hasty pudding, but we soon found that a peck of meal by taking up all the water it could be made to absorb, in a thorough boiling, would make the same kettle full (holding five pails) of sufficient consistency." In giving cob-meal to horses and neat cattle, that are fed with cut hay or straw, there is a double advantage, at least so it is stated by those who are well experienced, in feeding the grain and hay together. The grain, especially corn, is sometimes too heating to horses, and this tendency is counteracted by the stimulus of distension, afforded by the hay and straw. Mixed feed of this sort may be fed thrice in 24 hours. It is eaten in so short a time as to afford much beneficial rest to the animal. We would call the reader's attention to the facts stated in Mr. White's postscript.

ROASTED APPLES.—The following mode of roasting apples will make a rich dish, of rather an insipid one: Select the largest apples; scoop out the core without cutting quite through; fill the hollow with butter and fine soft sugar: let them roast in a slow oven, and serve up with the syrup.

He who puts himself to *trouble* to *pry* into his neighbors's business, gains nothing but scorn, while he exposes an *impertinent curiosity and vicious heart.*

GREAT AND IMPORTANT INVENTION—STEAM SUPERSEDED.

[Who would have imagined that when Homer conceived and uttered the fiction of Eolus' compressing the winds in leathern bags, and giving them to Ulysses to be transported wherever he pleased, thus imprisoned and dormant, to exert all their fury when afterwards let loose, that he was describing nearly the purport of the specifications of the patent right stated below? But, however striking and amusing may be the resemblance, we admit that it will not do to laugh at all new discoveries that seem to invite ridicule. For it this test had been permitted to govern the judgment of the world, the invention of steam navigation and steam carriages would have remained, as they were deemed at first, mere subjects for laughter. The splendid results of these once derided schemes, and many others, by which the world has been as much benefitted as disappointed, should make us hesitate in pronouncing the impracticability of any, however ridiculous they may appear at the first view.—*Ed. Farmers' Register.*]

From the Cincinnati Whig.

Our ingenious townsman, Mr. Alex. McGrew, has invented a mode for obtaining and applying power for the purpose of propelling cars upon rail roads, and boats upon canals and rivers, which we deem of the utmost importance, and which, in our opinion, must sooner or later, in a great measure, supersede the use of steam. The power is derived from *condensed air*, obtained and applied in a manner so cheap and simple, as to render the expense a matter of little or no consequence. Air used in the manner proposed by Mr. McGrew, has advantages over steam, in many essential particulars. It is infinitely less liable to explosion: but in case of such an event, its power to do mischief is greatly diminished, because of its being unconnected with boiling water. It is likewise much more safe in consequence of its not involving the slightest danger from fire. Where cars or boats are propelled by steam, there is constantly danger from this source, and numerous instances of immense destruction of life and property have therefore occurred from that element. The annoyance, too, arising from the sparks and smoke of steam cars, is very considerable to the traveller, but will be wholly avoided by the use of condensed air. The great and overwhelming superiority, however, of the use of the latter over the former element, consists in its economy. Air may be condensed and used upon the plan under consideration without scarcely any expense, except that which is incurred in the first instance in preparing the receivers and machinery.

We have witnessed, by the politeness of Mr. McG., the practical operation of this invention, and we are fully convinced of its entire success. Mr. McGrew has exhibited his plan and practical models to several of the most distinguished engineers in the United States, all of whom concur in deeming the invention of the highest possible importance, and declare their belief that it will almost entirely supersede the use of steam. The inventor has taken out a patent, and as the schedule furnished at the Patent Office by Mr. McG. himself, and which is attached to his letters patent, gives a full and clear explanation and description of the invention, we have obtained, and herewith submit a copy of it to our readers.

Copy of the Schedule.

"To all whom it may concern, be it known that I, Alexander McGrew, of Cincinnati, in the county of Hamilton, and state of Ohio, have invented or discovered a more economical mode of obtaining power for propelling cars upon rail roads, boats upon rivers or canals, and effecting other objects where such power may be wanted for the purposes of transportation, than has heretofore been adopted, and I do hereby declare that the following is a full and exact description thereof. My improvement does not consist in the employment of any newly invented machinery, but in the using of such power from falls or currents of water, or other natural or artificial sources of power as has heretofore been allowed to run to waste, and employing the same for the purpose of condensing air into suitable receivers; the elastic force of which condensed air is to be subsequently applied to the purposes herein designated. In numerous situations in the courses of canals and rail roads, and of other roads and water courses, there are falls of water, waste weirs, sluices, dams, etc.; the power from which, if economized, would be ample for the attainment of all the ends proposed by me. I bring this into use by taking the water power from wheels or other machinery already erected, or by erecting others where they do not already exist, using any of the known constructions of such wheels, or other machinery as may be best adapted to the particular situations in which they are to be employed. These I connect in the ordinary way with the piston or pistons of condensing engines, constructed for the condensing of air, and force air thereby into suitable receptacles, or reservoirs, furnished with the requisite tubes, valves, or other appendages, by which they are adapted to the containing of air thus condensed, and to the supplying of the same in measured quantities, so as to operate upon a piston for driving and propelling machinery as high as steam is now made to operate. The means of doing this does not require any description, being perfectly familiar to competent engineers. The air is to be condensed into one large stationary reservoir, and by means of a con-

necting tube and stop-cock, transferred therefrom into other reservoirs connected with the vehicle to be propelled. What I claim as my improvement in the art of propelling cars, boats, or other vehicles for trsnsportation, is the employment of the waste power of water, wind, or other natural or artificial sources of power, to the condensation of air in the manner and for the purposes herein-before set forth."

From the Gardener's Journal.

LIME AS A MANURE.

In looking over the Edinburgh Quarterly Journal of Agriculture, we found the following notices of lime as a manure. We indeed consider it the basis of good husbandry; and where Nature has not spread it over our fields, we ought to go to work, and do it with our own hands. Depend upon it, they would be profitably employed.

"Doctor Truell, by the application of marl (in the carriage of which he employed thirty bullocks),—rendered a very rocky, and otherwise unfavorably circumstanced out-farm, fertile. He ascertained that the effects of this ponderous manure are equally beneficial on light and argillaceous soils."

Limestone gravel has produced the most successful effects in many parts of the barony of Rathdown, in converting barren argillaceous moors into profitable meadow land, and it is only to be regretted that this admirable manure for tenacious soils, has not been more generally applied under similar circumstances. It is obvious that the admixture of this calcareous substance with stiff clay, devoid by nature of this earth, operates beneficially in a twofold way: mechanically by separating the adhesive particles of clay, and as a fertilizing stimulant(?) by its calcareous properties. Some years ago, the farmers in this north-east division, rarely availed themselves of the calcareous manures which Providence had given them, and in the few cases in which they did use them, they took corn crop after crop while the ground would yield a grain, and then without sowing any good grass seeds, suffered the land to rest, unaided by a cleansing fallow, or by any manure.

"The effects of marl are scarcely credible to those who have not witnessed them. There are recorded instances in the barony of Newcastle, on the sea coast, of eighteen successive crops of corn, from land previously covered with marl suffered to lie on the lea surface three years before breaking up. Farm-yard manure applied to land after marling, as we have had former occasion of remarking, causes the largest crops of potatoes."

Grease for wheel axles.—It is chiefly to give consistency to the composition that tar is mixed with grease for the hubs and axle-trees of wagons; and it answers this purpose well while it continues to be soft; but as the oily parts escape, the tar approaches to the nature of pitch, and absolutely increases the friction. Travellers who use this preparation have, therefore, to apply it frequently. During the fatigues of a journey, even the care of such repetitions is unpleasant; and we have long since entirely discarded tar as a lubricant.

It is now more than twenty years since we employed the following composition, which was revealed to us as a great secret, and for which money had been usually demanded: Thicken half a pint of melted grease with black lead in powder, having previously thrown in and melted a lump of bees-wax of the size of a small hickory nut. Apply it to the hubs and axles before it hardens.

By using this composition we have on various occasions driven our carriage two or three hundred miles without once greasing it after we started; and subsequent examinations have satisfied us that no attention of the kind, is necessary on such journeys.

We add a few precautions. In warm weather, we use tallow in preference to soft grease. Black lead is sometimes gritty—that is, contains sand, and such should be rejected. If tar has been previously applied to the hubs and axles, it ought to be very carefully removed before the composition is applied; and until the pores of the wood become filled with the composition, it may escape from the boxes in that way, and render frequent examinations for the first few weeks, necessary.

Genesee Farmer.

To cure the swelling of the throat in hogs.—In order to contribute to the usefulness of your valuable periodical, and to inform the public of what I find from experience to be an infallible cure for a certain disease with hogs, viz. the swelling of the throat, I herewith send you a receipt for this disease, with a desire that you publish the same in your work if you deem it of any import, and the same meets your approbation.

Take of molasses one-half a pint and a table spoon full of hogs' lard—to this add of brimstone a piece an inch in length. Melt it over the fire, and when cold or in a liquid state, drench

the hog with it; and nine times out of ten it will be found to have the desired effect.

My hogs were affected with this disease during the past year, and I found the above to be effective when all things else failed.—*Farmer's Reg.*

From the Southern Agriculturist.

ON MANURES.

Report of the Committee on Agricultural subjects, to the Society for the advancement of learning in South Carolina.

Gentlemen—Having been honored by your choice to present to you some agricultural subjects which may be interesting and advantageous to our state, we must, notwithstanding the inadequacy of our knowledge and experience, to do justice to so copious a theme, exert our feeble powers. Relying on your indulgence, we hope to take such views of the subject as may enable you to glean a few ears from among the stubble.

Although agriculture is the most ancient, and the most honorable, because the most useful and necessary profession, it is, as a science, as yet, in a surprising state of imperfection. It has always added to the glory of the states which have given it encouragement, and when skilfully conducted, has ever proven a source of individual wealth and national power. We cannot, therefore, bestow upon it too much of our care, nor seek with too much zeal the surest modes of securing the incalculable benefits to be obtained from it. Indisputable as these propositions are, it is a strange anomaly in human affairs, that this, most necessary wealth, and power-giving art has never had a regular footing in the schools of the ancient or modern world, there to be taught with the other arts and sciences which have given to man so much cause to be proud of the efforts of his reason and of the flights of his genius. Is it because it is the most easy and least intricate vocation? The most superficial observers only can look upon it in that light. It is very true that the industrious man, though guided by ignorance, is generally enabled to make a support, and even in some cases, to acquire affluence, but we must also admit that his exertions are most bewildered, and his success most limited, when a difficulty arises that baffles the routine of his operations.

The knowledge required to form a competent agriculturist, is as profound as it is various. So great is the amount and multiplicity of that knowledge, that we may well doubt the practicability of its ever being all possessed by one individual, be his talents, industry and opportunities ever so great. Every branch of science or of art is directly or indirectly connected with rural affairs. We shall not make the vain effort to enumerate them, we shall only point out a few of the nearest, such as mathematics, natural philosophy, botany and the physiology of plants, and the philosophy of vegetation. Chemistry is also indispensable; for it is in various ways intimately connected with agriculture.

The first principles, however, to which we must confine our labors for the present, include the knowledge of the different kinds of soils, and the adaptation of each to every particular object of culture.

Fertility depends on various circumstances; for, not only the upper stratum of the soil must be compounded of the proper earths and other substances necessary to constitute a good soil, but the subsoil also must have properties to correspond with the upper. A few inches of the very best soil would be of little avail over a stratum of impermeable clay, or over a thick bed of pure sand or gravel. The former could not afford room for the extension of the roots of plants, and it would retain too much water which would stagnate and destroy vegetation, while the latter would suffer all the water to sink and leave the surface too dry for the desired purposes. It is frequently impossible to remedy the defects of the subsoil; but, when it is feasible, the upper stratum may be improved by adding to it such substances of which it may be deficient, even to the degree of bringing a very steril soil to a high state of durable fertility. Indeed, we can see no reason why such soils should not, by proper means within our power, be brought to the very highest state of fertility to which land has ever reached in any part of the world. Land at the north has been made to yield upwards of 170 bushels of corn to the acre, which land was probably not originally of the highest grade. We have the same means of improving our land as the people of the north, and we have a more sure climate in our favor. Can any one show that it is impossible to make much of our land equal to the best of Alabama? We think it not only possible, but practicable. In order to do this, however, we should know the constituent parts of those richest soils, so as to know how to form one, the most requisite for fertility.

Many of the arts, assisted by science, have been in our day, carried to such perfection, that he who should, only a few years back, have ventured to predict that which we now witness, would have been thought a fit subject for a lunatic asylum. Agriculture is, at the present time, in the state that some of the improved arts alluded to, were a century ago, and no man would now dare to predict what wonders may be achieved in this department, if proper means be adopted and prosecuted with zeal. We venture to assert, that there is not one object of the pursuits of man, more deserving the use of these proper means, and of the most zealous perseverance than

agriculture. This is true with very few exceptions, in every part of the world; how much more then is it of a country like this which is essentially and exclusively dependent on the produce of the soil. This is emphatically true of the south-eastern states. Depend upon it, not only your prosperity, but your independence, nay, probably, your very existence rest on the exertions now recommended. We shall not say, gentlemen, for your own sake, but for the sake of your wives, children and their posterity, and for your own posthumous fame—reflect on this, and act promptly.

Arable soils are composed of silicious, aluminous and calcareous earths, to which may be added the magnesian. This last is most frequently absent, and its use, as a component part, is not yet well ascertained. It is supposed not necessary to the formation of a fertile soil. The other earths in due proportions, with suitable quantities of vegetable and animal matters, or putrescent manures, form the richest soils known to agriculture. Either of them, by itself, is perfectly inert and steril. The first, viz. *sand*, is usually, if not always the most abundant in all cultivated soils, even in those denominated aluminous or clay soils. The third, viz. *calcareous earth*, which is most generally in the form of carbonate of lime, is the least in the component parts of fertile soils. Silicious and aluminous earths are never absent in cultivated land; but calcareous earth is frequently so, at least in a perceptible degree. Without it, however, no soil is naturally or can be made by art permanently fertile; for although putrescent manures exert their fetilizing powers, when no calcareous earth is present, their beneficial effects are comparatively evanescent. We have said that neither of these constituent earths, by itself, is otherwise than perfectly steril. We have sufficient proofs of it in the chalks of Europe, and the bald prairies of our western country, as regards the calcareous earth; and we need not point to examples of pure sand, or pure clay to prove our assertion.

From what precedes, it is evident, that when it is desired to ascertain the qualities of a soil, it is best done by analysis, by which alone the proportion of each of its component parts can be ascertained. If it be found that one of the necessary earths is wanting, or is insufficient in quantity, such a soil can only be rendered fertile by supplying the deficiency. We have said that of the three principal earths, the calcareous is the most frequently deficient, and this is unfortunately the case in a great portion of this state. But although it is most often found wanting in the upper soils, we are not left quite destitute of resources; for, in a considerable section of the country, all below the falls of the rivers, rich and extensive beds of carbonate of lime, in the shape of fossil shells are to be found a few feet below the surface, and these can supply the deficiency. By means of these very extensive strata of shells, immense tracts of land in the low country, which are now abandoned as exhausted, can be, not only restored to their primitive state, but also be brought to a state of fertility far above that which they ever possessed. It cannot be denied that to perform this requires much labor, and your committee do not pretend to free you from the original sentence passed upon us: "In the sweat of thy face shalt thou eat bread." The question then is, is it worth while to undertake such a great work at the cost of so much labor?—or is it not better to abandon our impoverished state and seek fertility in the western wilds? Too many, far too many have already taken the latter alternative, and the population and wealth of our dear state are far removing to the west. If this system of emigration is persevered in, we ask, in dread of the answer—we ask, with the feelings of men exposed to the most imminent danger, what is to become of the state—the glorious, the hospitable, the chivalric state of South Carolina? We wait not for an answer—but we bid, or rather pray you to turn your eyes towards Italy, to the *Campania di Romana;* to the former mistress of the world herself, and there the answer is most solemnly written in most distinct characters. That country, once the garden and pride of the world—the dwelling place of its masters—where is all its glory? Gone, gone forever. The palaces and gardens of the Cæsars, and of all the great names which are yet the pride of history, are all replaced by infectious marshes, where nothing but desolation, misery and death can abide. Say not, gentlemen, that we exaggerate the prospect before us; that, at all events, such a condition is far from us. We hope it is very distant, and pray that the similitude may never be realized. But where are now the elegant abodes of hospitality, those palaces that, not many years since adorned the avenues to the good city of Charleston for many miles? There is scarcely any thing left of them except the magnificent lines of live oaks that led to them. These now act as the *ignis fatuus*, and entice the stranger in the hopes of finding the hospitality which seems promised at their termination, when he finds a void, if not a dangerous morass. The great cause of the calamitous change that has thus taken place in Italy, is the neglect of agriculture, by which the fair fields of productiveness become noxious and dismal morasses, yielding the deadly malaria, instead of the rich harvests of corn and luxurious gardens. You will say: 'but the Goths and Vandals came and ravaged that country, and began, what sloth and luxury finished.' True, they did come; but are we not also

threatened with the Goths and Vandals? Shall we, like the Romans, suffer sloth and luxury to cause our ruin?

The efforts of the southern states should be directed to the encouragement of a middle class of population, and let every avenue be opened for this class to take rank with the first. For this purpose, education should be promoted by every possible means, and no reasonable expense spared to attain this most valuable object; for it is the moral power of a state, as agriculture is its physical one. For this reason, the advancement of learning and the most durable amelioration of the soil, should be the great objects of our unremitted efforts. By these means only can we ever be powerful and retain our present property, nay our independence. This, we are satisfied, cannot be done without the fullest co-operation of our richer and more intelligent class of citizens. Even though the immediate and direct improvement of this class should not follow such efforts, yet the trial should be made. Advance rural science, and every inhabitant will be benefitted; for there is really only one prominent interest in this state, and that is agriculture. The others are all dependent upon it. It appears to us, gentlemen, that the administration, or rather the constitution of our state government, is defective in its arrangements; and we throw out the hint, that it may duly be considered. It seems to us that every department of our interest should have a competent officer at its head. In our financial department we have a comptroller and a treasurer. Why should we not have a minister of instruction and one of agriculture? These two most essential officers, if well chosen, would undoubtedly superintend their respective departments to the great advantage of the state.

We need principally knowledge and population, and from any degree of increase of them, a proportional increase of wealth is the necessary consequence. With these, and the exertions we are capable of, we could defy the worst efforts of our enemies, and rise triumphant from the conflict. By industriously spreading knowledge among our planters and farmers, we shall so increase the fertility of our soil that our citizens will cease to look westwardly for rich lands, and patriotism, aided by self-interest, will save the country.

The first stage towards the accomplishment of this most desirable object is the inquiry, 1st. Whether our soil needs, and is generally susceptible of the improvement proposed. 2d. Whether we really possess the materials to effect it; and 3d. Whether these materials are to be obtained generally, at such a moderate expense, as to warrant the undertaking?

[Concluded in our next No.]

A prudent woman is correlative to a wise man.

ENCOURAGEMENT TO SILK GROWING.—The legislatures of Massachusetts, and Connecticut, have passed laws granting bounties of fifty cents on each pound of silk raised and reeled in those states; and several other of the eastern states, have granted similar premiums. The legislature of the state of Vermont, have just passed a law, authorizing and directing the treasurer to pay out of the treasury of the State, the sum of ten cents for each pound of cocoons hereafter raised or grown within this State, as a bonus, or premium to the person or persons raising the same.

In the legislature of Ohio, bills where pending at the last advices to incorporate a Silk Company, and to encourage the culture of silk. Should not each state in the union follow those good examples?—[Farm. and Gardener.

Machine to gather Cotton from the Bolls.—We have now at our office the model of a machine for picking cotton out of the boll; and, to say the least of it, it is certainly a very ingenious piece of work. It is simple in its construction. A number of wheels abreast, have attached to their rims a number of pendulous oval shaped pieces of wood, set with card teeth bent upward. These wheels are fixed in front of a cart, and moved by the motion of the cart-wheels. The cards dip among the branches of the cotton stalk, seize the cotton, draw it out, and as they descend again in their rotation, pass through a breast or space armed also with straight teeth, which relieves the cards and deposites the cotton on the bottom or plain of the cart, whence it is drawn back by hand with a rake, until the cart is full. To us it seems impossible that the machine can pick a field clean; but suppose it leaves half the bolls untouched, it is still a most valuable discovery, if it pick the other half as fast as a horse can walk from rows end to rows end. Whether it fail or succeed, it is a machine highly creditable to the ingenuity of Mr. Emmons, the inventor.

Augusta Sentinel.

WORTH TRYING—In an English miscellany we find the following:—The danger of being suffocated by smoke, to which persons are exposed who enter premises on fire, may be effectually obviated by tying a wet silk handkerchief single over the face. A gentleman who lately tried the experiment, was enabled to remain in a room which was on fire, in the most dense smoke, and work a small engine untill he succeeded in extinguishing the flames.

"When do you intend, Mr. B. to leave off selling intoxicating liquor?" said a bystander to a landlord. "When *respectable* men leave off buying," was the laconic reply.

From the Farmer's Register.

Extracts from the Manuscript Notes of a Farmer.

You seem to wish me to write more about direct practical agriculture. I thought it better to say something first as to what the true principles of agriculture are, and what is required for their establishment and existence—besides I wish to see a little more of the results of my present crops, for it is only lately I began my practice.—The promise is such as I never saw before. I am confident I am right—but we must never halloo too soon—a small error or failure under new circumstances, no matter from what causes, is enough.

In 1833 I top-dressed a grass field in the fall. Its condition was good. 1834—mowed it, ploughed immediately—six weeks after sowed ruta baga without manure. Such a crop I never had, or ever saw, and I have seen thousands of acres. The extremity of the leaves measured 11 feet in circumference: they looked like the rank vegetation upon the banks of rivers. How often I looked at them! the feelings I would not exchange for any man's. 1835—Barley and down again with grass for three years. The barley was superb—not yet threshed. One of my pupils who returned from England this summer, said he saw none so good there: an Englishman said the same. I intended top-dressing it again this fall, but the grass is so luxuriant I thought it better not to do so. I have just lightly limed and plastered it. Oh! but it is a glorious system—and it costs nothing.

G. H. WALKER.

LABOR REQUIRED FOR SILK CULTURE.

It is difficult to make accurate estimates of the labor required in feeding and attending a family of silk worms of a given number; as there are several circumstances which tend to increase or diminish it materially—such as the distance the foliage is from the cocoonery—the size of the trees and the quantity of their leaves—the variety of the tree, whether Chinese or Italian, &c. &c.

The following estimate, however, has been made, by a correspondent of the New York Farmer, which may be regarded by the culturist as accurate as any thing he can find on the subject, short of actual experiment. "The labor required to attend 1,000,000 worms would be, the first week, two persons; for the second, four, for the third, eight; for the remaining two, fifteen or twenty." This will make an aggregate amount of 324 days necessary for a family of this number. The same writer estimates the product of this number at 500 pounds, which, at present prices, cannot be estimated at less than $3 a pound, after deducting the expense of reeling.

If these statements are to be relied on, it will be easy to calculate the nett profit which may be expected from 1,000,000 of worms. The gross profit being $1500, the expense of the labor is to be deducted. Calling this a dollar a day, which is the highest it can be called, it will amount to $324, which being deducted as aforesaid, would leave a nett profit of $1,176. But when the fact is taken into consideration, that most of the labor can be performed by boys and girls, and aged women, its expense will be materially diminished, and the profit proportionably increased.

From the Maine Farmer

SENTIMENTS.

Mr. Holmes: It is not he that reads much who attains to eminence in the sciences, but it is he who reflects well on what he reads. "Concoct your learning into judgment," was the advice of a distinguished citizen to an assemblage of students.

The world is full of worthless books—throw them away as worse than worthless, for they consume our time.

Religion is calculated to season and strengthen patriotism. Knowledge should be the handmaid of both.

A wise woman who values happiness will be as agreeable to her husband after marriage as before, and if her husband does not make a fair return for such good conduct he must be a son of dullness.

A handsome woman who is neither virtuous, intelligent, nor agreeable, is a horrible beauty.

If ambition be founded on selfishness, clip her wings; if founded on virtue or patriotism, let her have her wings.

A man who has no taste at all for literature, is very much like eternal frost joined to eternal darkness.

Sparkling wit influences weak minds more than valuable truths.

An honest politician will not support the measures of his own party, if clearly wrong, or at variance with the public good.

Men who are inflexibly honest in private life, will be so in the public councils.

Let every farmer who has a son to educate, believe and remember, that science lays the foundation of every thing valuable in agriculture.

The opposition against book farming rests on the shoulders of two monsters, ignorance and prejudice.

If you separate science from agriculture, you rob a nation of its principal jewel.

Agriculture, aided by science, will make a little nation a great one—what will it make of our State of Maine if our farmers will throw off prejudice and despise ignorance?

All the energy of the hero, and all the science of the philosopher, may find scope in the cultivation of one farm.

A skilful agriculture will constitute one of the mightiest bulwarks of which civil liberty can boast.

Use of Tobacco.—There is nothing better than a decoction of tobacco for destroying insects that infest either animals or plants. We have frequently, with safety and success, dipped young lambs in it, for the purpose of destroying ticks; but when applied to animals, care should be taken that it be not made so strong as to injure the animals, especially young ones; when given internally, any degree of strength is always dangerous—on plants it cannot be made too strong. In support of this theory, we give the following cases:—Mr. W. Renick, of Pickaway county, applied a strong decoction of tobacco to a young and valuable calf, with the intention of killing some lice with which the calf was infested. On making the application, the calf was immediately paralized, and was with difficulty recovered: the insects were, however, destroyed, and the calf eventually benefited. Last fall a distinguished Kentucky cattle breeder, Mr. G. N. Sanders, attended the Fair of the Hamilton County Agricultural Society, with a choice lot of blooded cattle; after the fair he turned them into an orchard in which the ground was covered with fallen apples; they having been kept in a lot without food for the principal part of a day, very naturally gorged themselves with the fruit, and in consequence were seized with a violent cholic; in this dilemma, being advised by a physician to administer a strong decoction of tobacco to a full-blooded short-horn cow: he took the advice and did administer the decoction as strong as it could be made, both into the stomach and by injection: the result was, the cow expired in a few minutes.—*Western Farmer.*

PREVENTIVE FOR THE HOLLOW HORN.

Although late in the season, some fine cows may be saved this spring, by pouring about "half a gill of spirits of turpentine in the cup or cavity on top of the head, just behind the junction of the horns—let it be repeated again in about 10 days or 2 weeks after the first application."

The above recipe was furnished us by a gentleman extensively engaged as a breeder, who has scarcely ever less than from 40 to 50 cattle, and from its highly respectable source we feel pleasure in giving it a place in our columns.

Farmer and Gardener.

The following lines were sung at the recent annual exhibition of the Essex (Mass.) Agricultural Society:

THE FARMER'S SONG.

The Farmer's life we love, although
Fatigued by toil we be,
Contented to *hard work* we go,
None happier than we.
We love the lands we cultivate,
The cattle that we rear;
Sloth, vice and knavery we hate,
But count free labor cheer.

CHORUS.

We cast our seeds on well tilled ground,
We dress our crops with care;
And when the harvest time comes round,
We earth's abundance share.

We envy not the rich or great;
The humblest farmer's lot
Is better than the vast estate,
By fraud or rapine got.
By healthful toil we win our bread
Beneath the glorious skies,
Enjoy the beauties round us spread,
And high God's bounties prize.

From early dawn to closing day,
To plough, plant, weed or mow,
The Farmer, whistling, hies away—
His wife is busy too.
To wash, to churn, to cook or sweep,
By turns her hands she plies,
Stops but to rock her babe to sleep,
Or hush her children's cries.

'Tis busy life, but often here
Th' affections of the heart
In holiest purity appear,
And highest bliss impart.
We thankful take what God bestows,
And learn to feel and know,
That the best cure for human woes
Is industry below.

We strive to cultivate heart and head,
Our lives from vice to free,
And trust, like well fill'd grain, when dead,
Life giving bread to be.
To more successful enterprise,
Than we ourselves have known,
Our seeds whence future crops shall rise,
Superior to our own.

ADDITIONAL LIST OF AGENTS.

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A. Harris, Johnsville, W. Ten.

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